

### **REMARKS**

This Application has been carefully reviewed in light of the final Office Action mailed January 27, 2006 (the "Office Action"). Claims 1-30 are pending in this application. Claims 1-29 are rejected in the Office Action. Applicants amend Claims 1, 14, 16 and 28 and cancel Claims 2-3, 8, 11, 17-18, 25 and 27. For at least the reasons discussed below, Applicants respectfully request reconsideration and favorable action in this case.

### **Allowable Claims**

Applicants note with appreciation the Examiner's indication that Claim 30 is allowable because the "prior art does not teach or make obvious *a stable signal transmitted at a power level such that the signal is received at the downstream amplifier at a power level of at least approximately -30 dBm* in conjunction with the other features of the claim." Office Action, page 8, ¶ 9.

### **Section 102 Rejections - Claims 1, 4-7, 9-10, 11-13, 16, 19-24 and 26**

The Office Action rejects Claims 1, 4-6, 9-10, 11-13, 19-23 and 26 under 35 U.S.C. § 102(b) as being anticipated over U.S. Patent No. 6,229,631 issued to Sato et al. ("*Sato*"). The Office Action also rejects Claims 1, 7, 16, and 24 under 35 U.S.C. § 102(b) as being anticipated over U.S. Patent No. 5,673,142 issued to Fatehi ("*Fatehi*"). Applicants respectfully traverse these rejections for the reasons discussed below.

Claim 1 recites transmitting from an upstream amplifier over an optical span a stable signal comprising amplified spontaneous emission (ASE) of the upstream amplifier, wherein the stable signal is transmitted such that the signal is received at a downstream amplifier coupled to the optical span at a power level of at least approximately -30 dBm and using the stable signal comprising the ASE of the upstream amplifier at the downstream amplifier to automatically set a gain of the downstream amplifier. Claim 16 recites similar elements. *Sato* includes a Figure 2 that represents the variation of power levels of the light signal transmitted through optical fibers 11a, 11b and 11c and the optical repeaters 12a and 12b of Figure 1, relative to positions on the transmission line. *See Sato*, col. 6, lines 14-18. Figure 2 illustrates that the transmitted light power suffers propagation loss across the optical fibers between the optical repeaters. However, there is no disclosure that a signal is transmitted

such that it is received at a downstream amplifier at power level of at least approximately -30 dBm. Moreover, *Sato* discloses that for an optical fiber amplifier an EDFA is used to estimate a signal quality based on its gain and ASE noise. *See Sato*, col. 7, lines 61-63. However, there is no disclosure the ASE of an upstream amplifier is actually used at the downstream amplifier to automatically set the gain of the downstream amplifier. Applicants also noted the disclosure of an optical filter at an upward side of optical receiver 13 to remove ASE noise. *See Sato*, col. 7, lines 51-53. The Office Action states that this filter is used to remove ASE propagating upstream but that the forward propagating ASE remains and is used to determine one of the estimation parameters, but the Office Action does not cite to any portion of *Sato* for this contention. Applicants respectfully submit that *Sato* fails to disclose transmitting a signal that is used to automatically set a gain of a downstream amplifier such that it is received at the downstream amplifier at power level of at least approximately -30 dBm or using at the downstream amplifier the ASE of an upstream amplifier to automatically set the gain of the downstream amplifier.

Therefore, for at least these reasons, Applicants respectfully request allowance of Claims 1 and 16.

Claims 4-7, 9-10 and 11-13 depend, either directly or indirectly, from Claim 1, and Claims 19-24 depend, either directly or indirectly, from Claim 16. Therefore, for at least the reasons discussed above with respect to Claims 1 and 16 Applicants respectfully submit Claims 4-7, 9-10, 11-13 and 19-24 are patentable over the cited art used in the rejections and request that the rejections of these claims be withdrawn.

#### **Section 103 Rejections - Claims 14-15, and 28-29**

The Office Action rejects Claims 14-15, and 28-29 under 35 U.S.C. § 103(a) as being unpatentable over *Sato* in view of U.S. Patent Publication No. 2004/0071392 issued to Lauder ("*Lauder*"). Applicants respectfully traverse these rejections for the reasons discussed below.

Claims 14-15 depend, either directly or indirectly, from Claim 1, and Claims 28-29 depend, either directly or indirectly, from Claim 16. Therefore, for at least the reasons

discussed above with respect to Claims 1 and 16 Applicants respectfully submit Claims 14-15 and 28-29 are patentable over the cited art used in the rejections and request that the rejections of these claims be withdrawn.

**CONCLUSION**

Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicants respectfully request full allowance of all pending claims.

If the Examiner believes that a telephone conference would advance prosecution of this Application, the Examiner may call Chad C. Walters, Attorney for Applicants, at 214.953.6511.

Although Applicants believe no fees are due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,  
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